a guide to VMS

by Lex Luthor and The Legion of Doom/Hackers

The VAX is made by DEC (Digital Equipment Corp) and can run a variety of operating systems. In this article, I will talk about the VMS (Virtual Memory operating System).

Entrance

When you first connect with a VAX you type either a return, a ctrl-c, or a ctrl-y. It will then respond with something similar to:

LOD RECURSIVE SYSTEMS INC. VMS V4.0
Username:
Password:

The most frequent way of gaining access to a computer system is by using a 'default' login/password. In this example you may try LOD as the username and RECURSIVE as the password or a combination of words in the opening banner (if there is one) which may allow you access, otherwise you will have to try the DEFAULT METHOD of entry. The version listed above (V4.0) is the latest version to my knowledge of VMS. The more widely used version that I have seen is V3.7.

When DEC sells a VAX/VMS, the system comes equipped with 4 accounts which are:
DEFAULT—This serves as a template in creating user records in the UAF (User Authorization File). A new user record is assigned the values of the DEFAULT record except where the system manager changes those values. The DEFAULT record can be modified but cannot be deleted from the UAF.
SYSTEM—Provides a means for the system manager to log in with full privileges. The SYSTEM record can be modified but cannot be deleted from the UAF.
FIELD—Permits DIGITAL field service personnel to check out a new system. The FIELD record can be deleted once the system is installed.
SYSTEST—Provides an appropriate environment for running the User Environment Test Package (UETP). The SYSTEST record can be deleted once the system is installed.

Usually the SYSTEM MANAGER adds, deletes, and modifies these records which are in the UAF when the system arrives, thus eliminating the default passwords, but this is not true in all cases.

The 'default' passwords that I have found to work are:

Username:	Password:
SYSTEM	MANAGER or OPERATOR
FIELD	SERVICE or TEST
DEFAULT	USER or DEFAULT
SYSTEST	UETP or SYSTEST

Other typical VMS accounts are:

VAX	VAX	VMS	VMS
DCL	DCL	DEMO	DEMO
TEST	TEST	HELP	HELP
NEWS	NEWS	GUEST	GUEST
GAMES	GAMES	DECNET	DECNET

Or a combination of the various usernames and passwords. If none of these get you in, then you should move on to the next system unless you have a way to get usernames/passwords, like from trashing, stealing passwords directly, or by some other means.

You will know that you are in by receiving the prompt of a dollar sign "$". You will be popped into the default directory which is dependent on what account you are logged in as. If you get in as the system manager, you have full access. If you get in on the field or systest accounts you may or may not have full access but you will have the privileges to give yourself full access. To give privileges to yourself: $ SET PROCESS /PRIVS=ALL

Once you have full privs, you can access any directory and any file, and also in the AUTHORIZE program which will be explained.

The VMS system has full help files available by typing HELP. You can use the wildcard character of '*' to list out info on every command: $ HELP *.

When you first logon, it may be to your advantage to get a list of all users currently logged onto the system if there are any at all. You can do this by: $ SHOW USERS. Then you should get something like this:

VAX/VMS Interactive Users - Total - 4
01-MAY-1985 11:37:21.73

OPA0:	DEMO	004C004C
TTD2:	LAWRENCL	0059004A
TXB1:	FIELD	008D004E
TXB3:	TWYLYSYS	01190057

It is highly recommended that if you are logged on in the day and there are people logged in, especially the system manager or the account you are logged on as, logout and call back later. I have found that no matter what system you are on, the best way to remain undetected is to call when no one is on the system. You do not want to call too late since the system keeps a record of when each user logs in and out.

To communicate with other users or other hackers that you are on the system with, use the PHONES Utility: $ PHONES Username. If the system has DEC-net, you can see what available nodes there are by: $ SHOW NETWORK. If you have mail the system will tell you so after logging in, simply type: $ MAIL. This will invoke the Personal Mail Utility; you can use help from there.

There are a lot of commands and many are not too useful (to the hacker anyway), so I will not go into detail. One thing about VMS, there is plenty of on-line help available which will enable you to learn the operating system fairly well.

Directories

To see what you have in your directory type: $ DIR. To get a list of directories on the system type: $ DIR [*.*].

When a VAX/VMS is first installed, it comes with nine directories which are not listed when you execute the DIR [*.*] command. [SYSLIB]—various macro and object libraries; [SYSMSG]—system message files; [SYSMGR]—files used in managing the operating system; [SYSHLP]—text files and help libraries for the HELP utility; [SYSERR]—directory for the error log file (ERRLOG.SYS); [SYSTEST]—files used in testing the functions of the operating system; [SYSMAINT]—system diagnostic programs; [SYSUPD]—files used in applying system updates; [SYSUPD.EXAMPLES]—sample driver programs, user-written system services, and other source programs; [SYSEXE]—the executable images of most of the functions of the operating system.

Inside these directories are files with the following file-types:

File-type	Description	Command:
.txt	Ascii text file	TYPE file-name
.hlp	System Help file	TYPE file-name
.dat	Data file	TYPE file-name
.msg	Message file	TYPE file-name
.doc	Documentation	TYPE file-name
.log	Log file	TYPE file-name
.err	Error msg file	TYPE file-name
.seq	Sequential file	TYPE file-name
.sys	System file	FILE-NAME
.exe	Executable file	FILE-NAME
.com	Command file	COMMAND NAME
.bas	Basic file	RUN file-name

There are others but you won't see them as much as the above. You can change directories either by using: $ CHANGE [DIR.NAM] or $ SET DEFAULT [DIR.NAM].

You can now list and execute the files in this directory without first typing the directory name followed by the file name as long as you have sufficient access. If you don't have sufficient access you can still view files within directories that you cannot default to by: $ TYPE [LOD.DIR]LOD.MAI;1. This will list the contents of the file LOD.MAI;1 in the directory of [LOD.DIR].

The use of wildcards is very helpful when you desire to view all the mail or something on a system. To list out all the users mail if you have access type: $ TYPE[*.*]*.MAI;*. As you may notice mail files have the extension of MAI at the end. The ;1 or ;2 etc. are used to number files with the same name.

(This is the first of an ongoing series on the VMS operating system. Be sure to look in future issues of 2600 for more in this series. If you want to see an article about a particular computer or operating system, let us know.)

The Infinity Transmitter—An Old Bug That Had Its Time

by Howard

There is always a great hush when the term infinity transmitter is mentioned, as if it were some amazing secret device, but it can be simply explained. The infinity transmitter or harmonica bug is a device installed within a target's phone. This device allows a person to call the phone and listen in on him while he is quite unaware. This device has a few problems, the biggest of which is that the target's phone must be connected to either a Crossbar or Step by Step switch. The other drawback is that the bug must be installed in the target's phone. This means one must enter the house, place the bug in the phone, and rewire it as required. This bug could also be detected if the target were to attempt to use his phone while you were monitoring his activities. Since you are on his phone line listening to him, he might think it strange that his phone was being used, especially if he has any technical background. Let's see how to use the bug once it is installed.

Once installed all the observer has to do is call the target's phone number. After the observer dials the last digit, he sends a specific tone down the phone line which causes the bug to answer the phone before it rings. The frequency of the tone is user selectable and set during the construction process. The exact frequency of the tone is quite unimportant.

This type of bug can be used from anywhere there is a phone.

The potential distance is infinite hence the name "infinity transmitter." Ending the audio visit with the target is just as easy as starting it. A different frequency tone is sent down the line telling the bug to hang up. Overall, a very simple concept.

The reason this bug works on Step by Step and Crossbar switches is because in these systems the audio and ring generator are connected to the phone called before it is answered. So it is possible for the bug to answer the phone before the ring capacitor is fully charged by the ring generator. ESS and DMS switches do not connect the audio to the called phone line until after the phone is answered, making the infinity transmitter useless. In the case where the user does not apply the pick-up tone immediately, the phone would ring, then stop suddenly. Therefore some skill is required to avoid tipping the target off to the fact that he is being watched.

Construction of this device should be relatively easy for someone with a little experience in the electronics world. The bug would be isolated from the phone by using two non-polarized capacitors of 1 uf or better. It would mainly consist of two frequency detectors. One would connect the audio from the mouth piece to the phone line and answer the phone when the pick-up tone is detected. The other would disconnect the audio from the mouth piece from the phone line and hang up the phone when the hang-up tone appears.

Reaching Out On Your Own

by Forest Ranger

Verification is a very touchy subject. The telephone company wants to keep verification secret from anyone beyond telco employees. But as phone phreaks should know that is quite impossible. There are two types of operators that do verifications, "0" (TSPS) for local verifications and IO (INWARD) operators for verifications beyond your NPA. They use their operator console, but other people use blue boxes.

KP:NPA+0+XX+NPA+XXX+XXXX:ST

The first NPA (area code) is yours and the 0 will get you on your TSPS operator lines. The next XX part is an area identifier. They are 00, 11, 22, 33, 44, 55, 66, 77, 88, 99. There are ten possible choices depending on which area you are in. For example, blue box verification for Michigan would be KP:313+0+66+NPA+XXX+XXXX:ST. The second NPA is the NPA of the number you are going to verify. The XXX+XXXX part is the rest of the number you are going to verify.

Once you have routed your verification you will receive a series of clicks (tandems stacking), then you will hear a beep and you will be on the line. You won't understand what anyone is saying because everything will be scrambled. The verification will last about thirty seconds. Then you will be beeped out and finally disconnected.

Federal laws regarding line listening have become much stronger—especially after 1974 when a subcommittee of the House of Representatives held a public hearing called "Telephone Monitoring Practices by Federal Agencies". At this hearing it was discovered that Bell had listened in to lines of their employees and had the power to listen in on anyone. This shocked many people and made federal laws concerning such activity much stronger. My point is don't abuse this verification, because all you need is a simple descrambler from Radio Shack to descramble the conversation on the line.

PURSUIT FOR PEOPLE

On August 7, GTE Telenet announced a new service which, if handled properly, will usher in a whole new phase of computer communications.

The service is called PC Pursuit and it enables people to connect their computers to other computers for $25 a month (plus a start-up fee of $25). In other words, a hobbyist in New York can connect his computer to a bulletin board in California and not have to pay for a long distance call. The "computer conversation" goes through GTE Telenet, a packet-switching network for computers, previously used exclusively by large corporations.

"To access the service," GTE's press release explains, "a user calls his PC Pursuit access number and is prompted to enter his home phone number and make a request for a destination phone number in a distant city. If the user's telephone number is not authorized, the phone call is terminated and a record of the call is generated. If the number is authorized, the subscriber is called back and automatically connected to the desired telephone number in the distant city, which could be a specific database or remote PC user. GTE Telenet is able to maintain full accounting of the origin and destination of all calls. Each user session can last a full hour, and users may access the service as many times a month as they wish."

PC Pursuit represents the first time a major corporation has attempted to win over computer hackers rather than intimidate them. J. David Hann, president of GTE Telenet, says, "We
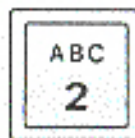
Phone-in Registration For College

Combined News Sources

A $77,600 computer system that allows students to sign up for courses and alter their schedules using touch-tone telephones will be tested by 300 Union County College (New Jersey) students this fall and up to 7,000 students are expected to be using the procedure by next spring.

"When the student dials in, each course will have a five-digit code number," John Faszal, the college's dean of computer services said. "The student will be prompted by a recorded voice for his identification, so students will have access when they are admitted, a password that only he will know [!], and then he will be led by the voice prompt through the procedure."

The system, purchased from Information Associates of Rochester and similar to those now being used by airlines for flight reservations, will inform students if their chosen courses are full and whether similar ones are available. It will also have the potential to provide many other services for students in the future, such as helping determine the status of their financial aid requests or the status of their admission application.

Trouble With 800 "Word Numbers"

The New York Times

When Hindalene Rosner saw "1-800-LIVE-AID" flash on her television screen in the early hours of the worldwide benefit concert, she had a feeling that things would get busy.

It should be explained that Mrs. Rosner is vice president of the Life Aid Corporation. And her company's nationwide toll-free telephone number is 1-800-LIFE-AID.

"Every two seconds," Mrs. Rosner said, calls were coming into headquarters in Scottsdale, Arizona, from viewers who were moved by the Live Aid concert to pledge money for the starving and homeless people of Africa.

Callers to Life Aid are told very politely that "this is a totally different business" and are given the correct listing—in digits (1-800-548-3243), not letters.

War Game Addict

Associated Press

A 19-year-old computer enthusiast who said he was addicted to a space war game and used stolen credit card numbers to charge playing time was placed on probation and ordered to make restitution after pleading guilty to wire fraud, a Federal official said.

The man, Kenneth Goldin, was placed on three years of probation and fined $500 by Federal Judge Maryanne Trump Barry.

Hacker Extortionist Caught

2600 News Service — R. Alexander

Phineas Phreak, he called himself as he roamed through computer bulletin boards. But he was caught by telco security men, prosecuted under a 1984 Virginia law designed to zap computer trespassing and sentenced to pay $300 restitution within six months.

The 14-year-old Phineas became one of the first persons to be dealt with under the new law after he pleaded "not innocent"—a plea frequently used in juvenile proceedings to avoid giving someone a criminal record. The Montgomery County, Md., youth broke into a computer bulletin board service operated by a Vienna, Va., man and transferred part of what was stored there to his own computer. The victim, Allen Knapp, 40, who runs the Washington Networks BBS out of his home, said his clients pay a $10 fee for a password and the opportunity to exchange data with others.

Knapp told *The Washington Post* that on Jan. 5 the youth managed to bypass "my normal security safeguards," transfer files to his own computer, and erase a substantial portion of Knapp's files. "He then called my answering machine, stating what he had done and making certain demands in exchange for the return of the files in his possession," Knapp said. According to Knapp, the youth wanted the access to obtain files that he would then exchange with his friends. Knapp said he called the Virginia State Police and the Chesapeake & Potomac Telephone Co. after hearing the message.

Pitcairn Island Now On AT&T Net

New York Daily News

After nearly 200 years of peace and solitude, the residents of Pitcairn Island in the South Pacific are about to enter the 20th century.

AT&T Communications Inc., in its relentless quest to wire the world, says it has decided to provide international long-distance service to this two-square-mile island where 53 descendants of Fletcher Christian and the other mutineers of the HMS Bounty still live.

The AT&T service will allow the islanders to receive and make calls anywhere in the world, instead of just ringing over to Tahiti. But they'll have to learn to talk fast. A three-minute call to or from the U.S. will cost $11.83 and $3.36 for each additional minute.

Calling from the U.S. will be tough. Since all the residents must use the island's one telephone, they have already divvied up the time for making and receiving calls from each country. They will be accepting calls from the U.S. at 2 pm, 8:30 pm, and 1:15 am.

Private Sector Update

2600 News Service

Last month, we told you about the raids in New Jersey which involved our official BBS, The Private Sector, as well as the flurry of headline grabbing that ensued. The sysop of The Private Sector is confident that he will have his equipment returned and charges against him dropped. His lawyer, Arthur Miller, who was obtained for the sysop through the American Civil Liberties Union, has not been able to make much progress on the case. Court proceedings have been postponed at the request of the prosecution. To date, the sysop still does not know the evidence against him, nor of any specific crimes he may be charged with. It is expected that the prosecution may try to hold up the equipment and any final actions in this case until the local elections are over.

Since the raids, *2600* has heard of several cases where BBS users have gotten phone calls from federal agents. We have also heard of a few other bulletin boards that have been taken down. If you know of any such cases, please contact our office at 5167512600.

In addition, since the BBS is not currently available, we have made arrangements for uploading of lengthy articles at our office number. They can still be sent by US Mail.

Dear 2600—

Dear 2600:

In response to the individual inquiring about a back pack microwave system (July 1985), it is my understanding that it is primarily a military field communications device with collapsible satellite antenna and not, as you correctly assumed, a consumer item.

Thank you for a much needed, educational alternative to blindly accepting the status-quo propaganda machine.

D.J.

Dear 2600:

In your May issue, you were talking about silver boxing and mis-named the AUTOVON precedences. Here are the correct names in order from highest to lowest: Flash Override, Flash, Immediate, Priority, Routine (all calls are routine if no precedence button is pushed, or if precedence buttons are not installed on the phone).

SEVOX

Dear D.J. and SEVOX:

We always appreciate response from readers who have some expertise to offer. Please do not hesitate to correct us.

Dear 2600:

For the reading list: *Understanding Telephone Electronics,* developed and published by Texas Instruments Learning Center, available through the Radio Shack chain, catalogue number 62-1388, 288 pages, $3.49. This book is a technical tutorial on the basics of telephone systems. You need a fair amount of electronics knowledge to understand the stuff in here, but nothing you couldn't get from the other "Understanding so and so" books that Radio Shack sells. Topics include the innards of both standard and electronic telephones, speech, dialing, and ringing circuits, digital transmission techniques, networks, modems, and more. In short, this is a goldmine of technical information about telephone communications, and (something rather out of character for Radio Shack) is even reasonably priced.

This is from the *Understanding Telephone Electronics* book. According to this book, *2600*'s opening words about how Alexander Graham Bell answered his phone (Jan. 84 issue) may have been inaccurate, and I quote:

"Early telephone circuits were point-to-point (not switched), and the caller gained the attention of the party at the other end by picking up the transmitter and shouting 'Hello' or 'Ahoy'. This was not very satisfactory, and schemes based on a mechanical signaling arrangement were soon invented. The one in common use today, called the 'polarized ringer', or bell, was patented in 1878 by Thomas A. Watson (Mr. Bell's assistant)."

So it seems that "Ahoy" was not how A.G.B. answered his phone, but more likely how he induced someone else to answer the phone. That makes more sense, since "Ahoy" was usually used at sea to raise the attention of someone else out thereon the foamy brine. Imagine those days of early telephones, where you might walk by that new contraption and hear a dim voice inside yelling "Ahoy".

Talbot

Dear 2600:

A while back you were asked if REMOBS really existed. I can tell you for sure that REmote OBServation numbers do, in fact, exist. The hardware is manufactured by different companies. One of which is called Teradyne, which makes a system called 4-tel.

These systems are working when an exchange is set up for it in the Central Office. They are used for testing and are perfectly legal.

The equipment was built so that you enter a code then a number. It will listen to a number for a limited time and then it sequences to the next number and then the next. But it y takes a few seconds to modify the equipment, so it doesn't step to another number.

As far as I know the going price is $1,500 to get a teleo employee to do the modifications. A guy I know was approached by a phone company employee who wanted to get some money and he offered to set up the system and provide a number and code that could be dialed up from anywhere.

Dear 2600:

I've been thinking of starting my own bulletin board. But I'm not looking forward to the possibility that some jackass will leave a credit card number or other nasty information on my board and that some even bigger jackass will see said message before I can delete it and accuse me of conspiring somehow to defraud or steal or build explosives or whatever else they happen to be afraid of will happen at that moment. The recent raids in New Jersey indicate that even a conscientious sysop (as the fellow who was running the Private Sector claims to be) can get screwed over by computerphobic police and Federal agents. What preemptive protections are available for a bulletin board operator who plans on staying within the confines of the law and yet does not want to stain her or his board with warnings and continually censor the flow of messages? Freedom of the press is a marvelous concept, and apparently allows folks like USA Today to stain every available streetcorner with their one-legged vending machines. What would one have to do to become a "press"? You don't have to be made out of paper, since radio and television reporters qualify. Is there a union I can join? A professional society? Maybe we should start one? Can you recommend any place where further information on such would be available?

W.U. Friend

Dear W.U.:

You ask many intriguing questions, and we believe that we could devote an entire issue to answering them. In fact, we spent a great deal of the August issue of 2600 discussing the very things that you brought up. Many of your questions could be answered by allowing yourself to get busted and letting Warren Burger and the rest of the Supreme Court decide. This may be the easiest way because there are few laws, guidelines, or precedents. Right now, we do not know of any "unions," but there hundreds of computer user groups that are actively discussing these problems, and we also foresee groups forming to specifically address the problem. Especially since those computerphobes you were referring to are trying to get legislation passed to limit BBS's in this country. You must remember that this is a very popular issue, and it will come into play in various elections this fall, including those of the prosecutors' who are pressing charges against the Private Sector's sysop.

The 2600 Information Bureau

Lex Luthor and LOD/H updated Telenet Directory. REVISION #2, Last Updated: 08/20/86

ADDRESS	OS/COMP TYPE	SYSNAME/OWNER/RESPONSE/COMMENTS/ETC.
20120	VM/370	
20125		NJIT Electronic Information Exchange(EIES)
20130	TOPS-10	NDC - SYSTEM;
20131 *	VAX/VMS	
20133	BURROUGHS	Running CANDE Operating System
20134 *	1V.2.3	Primenet awh
20135 *	1V.2.3	Primenet awh
20151 *	19.3.0	Primenet USCG.0
20155 *	19.3.0	Primenet USCG.0
20159	19.2.3a	Primenet TBN31
20166	19.3.7	Primenet SYS001
20171		"RDS #1 USER#"
20173	VM - TSO	
20180	VAX/VMS	A...t Service Center
20182		...nkers Trust Customer Service
20188		Dunn & Bradstreet Systems
20189	VM/370	Prushare
201142		
20234		"User Number-- help-phone 313-556-1574"
20236 *		"Network sign-on failed: sign-on comm"
20243 *	DB AOB/VS	
20249	IBM	TCAM Enter system ID:
20299	TOPS-20	The Information Service
20212a		(connects but no response)
202131		USER#
202139#	TOPS-20	TR1-SMP
202140#	TOPS-20	TR1-SMP
202144#	TOPS-20	TR1-SMP
202152#	TOPS-20	Washington Office Of Finance
202202		Compuserve
202214	19.3.5	Primenet aps
20321 *	Port Sel.	"Enter Class"
20322	VM/370	
20328	VM/370	
20331	DB AOB	zerox
20340	IBM	"Command unrecognized"
20358 *		
20364 *		(Connect/disconnect)
20366		"Login Please!"
20420		Stanford
20423		University of Alberta
20436		University of Calgary
20447		UTCG Datapac
20459		Gateway: Unconfigured device
20461	CYBER	Cybershare LTD.
20472	S-19.4.1	Primenet IBC
20473	RSTS V7.2.4	Novatron
20474	19.2.3	Primenet PRICAL
20481		Gateway: Unconfigured device
20485	19.1.5	Primenet PRICAL
204105		Gateway: Destination not obtainable
204112		Gateway: Unconfigured device
204171	RSTS V7.2.4	CAM TROT SYS A
204188	19.2.5	Primenet PDC01
204192	19.1.5	Primenet PRECL1
204197	18.3.6.0	Primenet SYS91
20620		Boeing
20638 *	DB AOB/VS	
20A40 *	19.3.5.1	Primenet PDS0
20652	19.2	Primenet cad13
20665		(Connects but no response)
20680	IBM	"Enter CICS or Milten"
21210		D&B SYSTEMS
21221	19.2.7	Primenet SYSA
21224	19.3.7,R4	Primenet SYS0
21228 *	TOPS-20	Landart Systems Inc.
21230	19.2.7	Primenet SYSB
21243		Citicash Manager (C/C/M)
21244	10-23	C/C/M
21249 *		Citibank
21250 *	VAX11/750	Group Financial Systems
21252 *	19.3.3	Primenet SYSA
21255		C/C/M
21256	20-17	C/C/M
21264	04-39	C/C/M
21266		
21267	05-17	C/C/M
21268	10-49	C/C/M
21270	TSO - VM	Using the "Top Secret" Security Package
21272		
21282		Bankers Trust Customer Service
21286 *		DTSHARE
21287	10-330	C/C/M
21288	DEC-20	American Express Corporate Info Systems
21289	RSTS V7.0.9	IPI CI?]
212112	VM/370	
21212A#		
212131	VM/370	
212136#	VAX/VMS	Tobase New York System
212137	17.4.0	Primenet XNY
212138	17.4.0	Primenet XNY
212141		Telemail
212142		Telemail
212144	VAX/VMS	Office Information Systems
212147		Federated Edge System
212149		"Bank#"
21210t		C/C/M
212152	VAX/VMS	
212155	19.4.0	Primenet BAL.23.PNY
212156	19.4.0	Primenet BAL.23.PNY
212159#		"Invalid Blank Password"
212144		Dunn & Bradstreet cics
212167#	RSTS V7.0	
212168		"Enter Identification"
212200		
212205		D&B Systems
212224#		Global Electronic Mail Service (G:?
212254	Port Sel.	Shearson/Lehman - Amer. Exp. Info N
21322	UNIX	Interactive System 3
21323	UNIX	Interactive System 3
21330 *		L.E.S.
21335		Marketron Research And Sales
21339 *	MICRO/600	USC - ECL
21341 *		
21344	IBM TSO	BDC/ORBIT Database (Using "ACF2" Se
21348 *	MICRO/600	USC - ECL Port Selector
21370		ICC-West System #2
21372		ICC-West System #3
21373		ICC-West System X1
21504	CDC & SPERRY	MICOM 600
21505	CDC & SPERRY	MICOM 600
21588	19.3.2	Primenet MBCOBT
213105	19.4.2	Primenet MD.MDP
213170		Dialog
213219	VAX/VMS	Calstornia Tech, Physics Vax
213236		Dialog
21442	PRIME	DNA Online
21444		Marathon
21471	F9.3.3	UCCEL PASSAC
21472	IBM TSO	UCC (Using "ACF2" Security Package
21475	UNIVAC L100	UCC
21533 *	VAX/VMS	VAX VOS
21532 *	DB AOB/VS	
21535 *	IBM TSO	IMS America
21540		VU/TEXT
21565		Newsnet
21566		Newsnet
215A7 *		"Command unrecognized"
21592	19.4.0	Primenet IGD
21653	Burroughs	#X7700 cande 3320 you are tnet!
21654	19.2.12	Primenet TRWIAE
21725	CYBER	U of Illinois
21726	UNIX	U of J Computing Services
21930	DB AOB	
30120	IBM	National Library of Medicine
30121 *		NASA Recon
30123 *		
30124		Source System L0
30126	PRIME	DNA ONLINE
30128		Source System L3
30135	UNIX 4.2	NLM-VAX
30136		
30138		Source System L1
30145		General Electric
30147		Source System L2
30148		Source System L5
30149		Source System L4
30155		Newsnet
30157		(Connects but no response)
30158	PRIME	CBA online
30176	UNIX	SCI Machines
30320	CBS 6000	Computer Sharing Services
30323	PRIME	
30325	RSTS V7.0.7	C. R. C.
30330		Computer Sharing Services
30340	RSTS V7.0.7	C. R. C.
30349		Computer Sharing Services
30345	Burroughs	Network Session (B7900 using Cande
30368		Computer Sharing Services
303148#		
30520	HP-3000	
30522	HP-3000	
305159		VU/TEXT Please Sign On
31230		"Service ID="
31231	TOPS-10	C.I.C. Timesharing
31232	TOPS-10	C.I.C. Timesharing
31234		"Your entry is incorrect please tr;
31236	Port Sel.	"Enter Class"
31240 *		
31241		<<Same as 31224>>
31242 *	RSTS V8.07	Travenol SYSA
31243 *	RSTS V8.07	Travenol SYSA
31244 *	RSTS V8.07	Travenol SYSA
31246 *		"Request in violation of system sec
31247 *	19.3.7	Primenet SYSA
31249		American Hospital Supplies Corp.
31250		American Hospital Supplies Corp.
3125V		Official Airlines Guide (OAG)
31265	IBM TSO	TIME INC. Chicago Datacenter
312320		"PORT = #X25V00 SVC01 USER 207"
312363		"PORT = #X25V00 SVC01 USER 207"
312370#	VAX/VMS	BKVAX2
312233		"PORT = #X25V00 SVC01 USER 10?"
312235		"PORT = #X25V00 SVC01 USER 10?"
312236		"Please reenter logon procedure"
312257		ID: Password
312264		C.I.C. Timesharing
31328		Comshare
31340		ADP Network (Type "AID")
31341		ADP Network (Type "AID")
31370	DEC-20	HR Timesharing
313131		"USER NUMBER-- Help Fone: 313-5
31590		"enter system id" b=bra i=vms/cms
40427	19.4.2	Primenet EMA:

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ADDRESS	OS/COMP TYPE	SYSNAME/OWNER/RESPONSE/COMMENTS/ETC.
40431 *!		
40433 *!	DG AOS/VS	
40487 !		
40440 !	RSTS V9.0	Computone
4041309!	HP-3000	
41321 *!		(type TN89) SFH READY
41320 !		Dialog
41321 *!	Port Sel.	
41327 !	IBM 3033A	Stanford Data Center
41348 !		Dialog
41550 *!		"Network (SUR) terminal must sign-on"
41553 !	VAX/VMS	
41557 *!		"Network (SUR) terminal must sign-on"
41557 !	19.2.11	Primenet MD.MMR
41560 !		Leasametric
41567 *!		"Network (SUR) terminal must sign-on"
41570 !		LOGON:
41590 *!	DYSTAR ELF	Harper Group Information Network
41597 !		C F & G Port Selector 2 (type help)
41639 !		Miller Computing Services (MD.CDM)
41640 !		MD.TST
41449 !		DPL Speedbal)
41460 !		Northern Dynamics
41665 !		Edmonton Computer System
41667 !		Hardy Assoc.
50921 !	19.1.1	Primenet A18
51109 !	HP3000	Hewlett Packard Co.
51250 *!		AHSC (American High School) CXYY)
51330 !		Lexis/Nexis
51331 !		Headnet
51337 *!	19.2.9	Primenet EO3
51340 !	19.2.9	Primenet EO3
51590 !	RSTS	Life Care
51530 !		Lexis/Nexis
51623 *!	RSTS	User Number"
51626 *!	DG	Date General Bank
51630 !		New York Institute of Technology
51645 !		"Enter System Select"
51655 !		"SERVICE ID="
51656 *!		Coopers+Lybrand MIS New York
51729 !	RSTS	Scientific CC
51730 !	IBM TSO	
51731 !	IBM TSO	
51732 !	VM/370	
51733 !	VM/370	
60320 !		Dartmouth Time Sharing
60322 !	HP-2000	
60745 !	VM/370	"Enter system ID"
60921 !	IBM VM	(Type VM than LOGON)
60923 *!	TOPS-20	F.CSC.
60942 !		Dow Jones
60963 !		(No response)
60968 !		(No response)
61140 !		"ID , Password, Service ?"
61223 !		Mestlan
61234 !		"Please login 08:24:44"
61236 !	TOPS-10	Coordinated Management Systems
61237 !		Mestlan
61241 !	TOPS-10	Coordinated Management Systems
61266 *!	CYBER 035	(Port Selector)
61282 *!	PRIME	
61287 !		Mestlan
61724 !	IBM TSO	TSO/IDNGDC/CULLDG/V! /INTERACT/M204DEVL
61730 *!		BTE LAN
61737 !	19.2.7E	Primenet BDGH
61738 *!		BDN-TC-TELNET
61746 *!	19.2.7E	Primenet BDBB
61747 !		HOST:
61748 !	PRIME	IRI System 4
61749 !	19.2.7E	Primenet OABB
61750 *!	19.2.7E	Primenet BDGP
61754 *!		"Welcome to JETNET"
61763 !	PRIME	IRI System 3
61767 !	PRIME	IRI System 2
61772 !	PRIME	IRI System 2
61770 !	19.2.11	Primenet MD.D
61794 !		Marlboro HPGIC Software Engineering
617102 !		AMD: Enter System
617115 !	19.3.9	Primenet TRNG.E
617119 !		"ENTER i=irving t=test w=interact"
617122*!	IBM CICS	Faxon Information services
617133 !		Weather Services International (WSI)
617135*!	VM/CMS	Arthur D. Little Inc.
617137 !	VM/370	
617139 !	MULTICS	M.I.T.
617140 !	VM/370	IDC
617144 !	19.3.4	Primenet KENNOD
617148 !	19.2.71	Primenet OABB
617152 !		
617158 !	19.2.7F	Primenet BDGW
617160 !	19.3.9	Primenet S3B
617162 !	19.3.8	Primenet AMLEY
617163*!	19.3.4	Primenet DARBIE
617169 !	19.2.7F	Primenet PBM36
617220*!	VAX/VMS	
617226 !	VM/SP	MDS VM/SP SYSTEM 6

ADDRESS	OS/COMP TYPE	SYSNAME/OWNER/RESPONSE/COMMENTS/ETC.
617230 !	VM/370	
617239 !	PRIME	
617250 !		Faxon Information Services
617258 !		MGH Teaching Supervisor
617250 !	19.2.4	Primenet HENCO2
617269 !	19.4.1.C8	Primenet C8850
6172748!	HP-3000	
6173156!	19.2.7F	Primenet BDGP
617330*!	VAX/VMS	Shawmut Bank Of Boston
617343 !		Sylvania lighting center
617350 !	19.2.7F	Primenet pbn39
6173528!	19.2.7F	Primenet OABB
617403 !	PRIME	
71115 !	18.37LNT	Primenet TP SYS BTCHET
71116 !		
71325 *!	TOPS-20	
71329 *!	RSTS	M.E.I. Systems
71334 *!	18.3.175	Primenet BUC
71345 !	DG AOS	Dresser-Magcobar
71353 *!	IBM	Hou..D. Tenneco Inc. (ACF2)
71354 *!	IBM	Hou..D. Tenneco Inc. (ACF2)
71355 *!	IBM - VM	Tenneco Corporate VM Systems (ACF2)
71356 *!	IBM - VM	Tenneco Corporate VM Systems (ACF2)
71359 *!	DG AOS	
71361 !	19.4.2.10	HWC.1
71363 !	19.4.2.10	HWC.1
71365 !		"ERR-Invalid Action Code"
71369 !		"ERR-Invalid Action Code"
71383 !	HP-3000	
71386 *!	IBM MVS/SP	Tenneco MVS/SP System (ACF2)
713350 !	19.2	Primenet CC1.1
713176 !	19.1.5	Primenet PREVS1
71430 *!	HP-3000	
71431 !		
71438 *!	HP-3000	
714116 !	HP-3000	
7141236!	HP-3000	
71620 !		UNION CARBIDE USER NUMBER
71724 !	19.2.10	Primenet B2901A
80125 !		WASATCH SECURITY SERVICES TIMESHARE
80126 !	VAX/UNIX	BERKELEY WASATCH SYSTEM
80143 !	HP-3000	
80144 *!	DG AOS/VS	
80154 *!	VAX/VMS	
80160 *!	DG AOS/VS	
80165 *!	DG AOS/VS	
80423 !	Port sel.	Babcock and Wilcox Computer Center
80424 !	Port sel.	Babcock and Wilcox Computer Center
80858 !	HP-3000	
81330 !	VM/370	
81331 !	VM/370	
81335 !	19.3.7	Primenet
81352 *!	TOPS-20	Price Waterhouse Timesharing
81353 *!	TOPS-20	Price Waterhouse Timesharing
81355 *!		Price Waterhouse System
813132*!	VM/370	
813140 !		IBM Information Network
81722 !		Radio Shack
81724 !		Radio Shack
81730 !		
90432 !		Enter RYP[
90433 !		Enter RYP[
90450 *!	DG AOS/VS	
90455 *!		
90795 !		Telemail
900741 !		Telemail
91433 !		
91438 *!	VM/370	
91441 *!	VM/370	
91442 *!		"ZAH0001 complete is active"
91445 !		General Foods
91930 !	IBM	"Please reenter logon line"
91931 !	IBM	"Please reenter logon line"
91933 *!		

"*" at end of address signifies "will not accept collect connect, so you will have to enter id and a password. Any addresses responding with "Rejecting" or "Not Operating," means that the system is down at the moment, and you should try back at another time. All above addresses were working as of the date of update.

Definitions of abbreviations:

DG - Data General
AOS - Advanced Operating System (DG)
ACF2 - Access Control Facility 2, Software Security Package for IBM Mainframes.
CICS - Customer Information Control System (IBM)
TSO - Time Sharing Operating system (IBM)
TOPS - Total Operating system (DEC)
RSTS - Resource Sharing Time Sharing (DEC)
CDC - Control Data Corporation (Makes CYBER Computers)

CONTRIBUTORS:

Lex Luthor / Blue Archer / Doctor Who

SYSTEMATICALLY SPEAKING

Dick Tracy Toys Are Closing In

The world's smallest pocket cellular phone—7 inches long and just 15 ounces—will be introduced at a Las Vegas telecommunications show in September.

The Walker Pocket Phone will be a tiny version of the cellular car phone. It will not require a base station and can operate anywhere and will retail at about $3,000.

At least three American companies have unveiled desk-top picture phones this year and two more companies plan 1986 releases. Image Data Corp. began delivering Photophone earlier this year. The device attaches to an ordinary phone line in a minute, takes five minutes to learn to operate, and transmits black-and-white still pictures to its mates in five to fifteen seconds. It is priced at $8,500.

Datapoint Corp's recently announced MINX does the same in color and can also attach to a personal computer. It is priced from $8,800 to $11,100.

A full-motion color system from Widcom Inc. goes for $50,000 for a picture squeezer and $20,000 per station. Picture squeezing is a process that accounts for the fact that only a small amount of information can be sent down a regular phone line, and a video signal requires 150 times more information than a voice signal.

Validec Inc. has invented a hand-held terminal aimed at the restaurant business that allows orders to be placed without the waiter having to ever leave the customer's table. The Point of Origin System is a local area network of printers, terminals, and computers that can be placed at the bar, kitchen and cash register. It uses radio frequencies to communicate with the host computer which can either be an IBM PC AT or AT&T 6300. In addition, the information display allows the restaurant to keep track of every item ordered and how many tables a waiter served on any given shift. This will allow the restaurant owner to decide which are the unpopular items on the menu and to examine the efficency of the employees.

Directory Assistance By Computer

Since May, 1984, when the seven regional telephone operating companies imposed a 50¢ charge for interstate directory assistance calls, direct marketers have sought to have that charge rolled back or eliminated, and also to have the phone companies make directory information available on computer tape or directly via computer terminals.

Mountain Bell, based in Denver and serving telephone customers in Idaho, Montana, Wyoming, Utah, Colorado, Arizona, and New Mexico, has taken the biggest step in that direction so far with the creation of a computer system it calls ScanTel. Available for a month, but as yet unpublicized by the company, ScanTel allows those equipped with a computer terminal or personal computer to access the company's entire directory database.

The ScanTel database is separate from that used by directory-assistance operators, although it contains the same listings. It differs from the conventional database, however, in that it can be searched not only by name but by address. Soon to be added is a reverse directory feature, permitting users to find out who belongs to a given telephone number.

Users of the system can access it via telephone from anywhere in the country. A three-tiered pricing scheme has been established that simultaneously charges 50¢ per minute of use, 25¢ for each request, and 5¢ for each response. However, the system can handle requests for multiple addresses, such as all those on a given street. That would be considered a single request at 25¢ and each name, address, and phone number found would cost 5¢.

Pest Control

If you own less than 100 shares, BellSouth will pay you $10 to get lost. The company is shooing away small investors who clutter up the books and hold only 14% of the 301.9 million shares. Shareholders who agree will be paid the market price for their stock, plus $10 to close their account.

Bell Propaganda Films

A suburban street served as a movie set last month as New Jersey Bell taped a movie about the consequences of cheating the phone company with computers and other technologies.

The movie, produced for AT&T, is "part of a total deterrent package," said Karen Johnson of New Jersey Bell. Although the full program has not yet been fully developed, Johnson said one of the videotapes will be targeted toward grammar school and high school students. Other groups to be targeted include vocational students, college students, and members of the military.

The program is designed to make viewers aware of the pitfalls of cheating Ma Bell, using computers to cheat systems, using false credit cards and other methods of avoiding payment.

Europe Standardizing Telecoms

In Spain, the busy signal is three pips a second—in Denmark it's two. Telephone numbers within French cities are seven digits long—in Italy they're almost any length. West German phones run on 60 volts of electricity—elsewhere it's 48.

This list can go on and on; only about 30% of the technical specifications involved in phone systems are common from one country to the next. In telephones, as in much else in Europe, each country has gone its own way. But now the idea of standardizing telecommunications systems is catching on. Officials in national governments and at the Common Market executive commission are pushing it as a way of opening telecommunications markets and cutting phone bills. Big equipment makers are supporting it as a way of expanding their sales abroad.

By the year 2000, telecommunications may grow more than threefold to 7% of the Common Market's gross domestic product, topping autos as the biggest industrial sector. Seven of the world's top 13 telephone switch makers are European. Many political and economic issues cloud the standardization process, because companies stand a lot to gain from these potential markets, and some have a lot to lose.

Pursuit

hope that we will be providing a safe, positive outlet for computer hobbyists, giving them inexpensive, virtually unlimited access to hundreds of free databases and bulletin boards. By removing the prohibitive cost from recreational data communications, perhaps PC Pursuit will encourage growth and advancement rather than mischief and abuse among hobbyists."

We think it's great. At last we are being encouraged to take advantage of technology without paying ridiculous prices. We look forward to the day when all "long-distance" calls will cost the same as local calls, and free databases be made available to everyone.

Naturally we are a little concerned that all of this data will be going through GTE Telenet, i.e. just about every hacker bulletin board would at some point be called through it. It wouldn't be too difficult to spy on someone's data from within the system, but we feel that's already the case at present with all communications. As always, we recommend scrambling sensitive or private communications.

It's unlikely that this new system (co-developed by Digital Pathways, Inc. of California) will be victimized by hackers because of the callback feature. Still, if there is a way to defeat this, you can count on it being discovered. Even at this point, though, the most that any one person could cheat the service out of is $25 a month.

Our main complaint with PC Pursuit is that it isn't available in nearly enough places. Only the largest of cities can use it to call other large cities. A list of dial-ups appears in this issue. When GTE finally gets around to implementing nationwide or even worldwide service, they will have a powerful, trendsetting, people-oriented product.

(More info can be obtained by talking to a human at 8003684215 or a computer at 8008353001.)
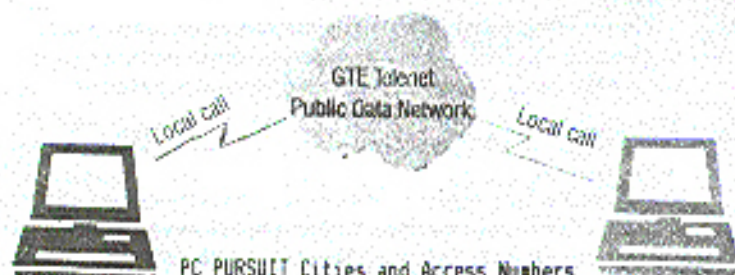
PC PURSUIT Cities and Access Numbers

CITY	AREA CODE SERVED	LOCAL ACCESS NUMBER	CITY ACCESS CODE
Atlanta	404	584-2873	Atlanta
Boston	617	423-0547	Boston
Chicago	312	565-3927	Chicago
Dallas	214	651-7094	Dallas
Denver	303	671-5146	Denver
Detroit	313	961-9555	Detroit
Houston	713	227-5742	Houston
Los Angeles	213	624-6062	LA
New York	212	675-3738	New York
Philadelphia	215	574-0613	Philly
San Francisco	415	398-1134	San Fran
Washington D.C.	202	659-2863	Wash DC

Touch Tones

	1209hz	1336hz	1477hz	1633hz
697hz	1	2	3	A
770hz	4	5	6	B
852hz	7	8	9	C
941hz	*	0	#	D

Multi-frequency Tones

	900hz	1100hz	1300hz	1500hz	1700hz
700hz	1	2	4	7	11
900hz		3	5	8	12
1100hz			6	9	KP
1300hz				10	KP2
1500hz					ST
2600hz	(actually a single frequency tone)

Other Special and Useful tones

Tone	Frequency	On Time	Off Time
Dial	350hz and 440hz	continuous	
Busy-signal	620hz and 480hz	1/2 second	1/2 second
Reorder	480hz and 620hz	1/4 second	1/4 second
Ringback (normal)	440hz and 480hz	2 seconds	4 seconds
Ringback (PBX)	440hz, 480hz	1 seconds	3 seconds
Off hook attention	1400hz, 2060hz 2450hz, 2600hz	0.1 seconds	0.1 seconds
No such number	200hz, 400hz	Continuous frequency modulated at a rate of 1hz	
Audible rings Standard	440hz, 480hz	2 seconds	4 seconds
Synchromonic	20hz, 30hz, 42hz, 54hz	NA	
Decimonic	20hz, 30hz, 40hz, 50hz	NA	
Harmonic	16.67hz, 25hz, 33.34hz, 50hz	NA	
TASI locking frequency	1850hz	5 milisec.	
Out of band signaling	3700hz	NA	
Payphone coins Nickel-1 time	1700hz, 2200hz	66 milisec.	
Dime-2 times	1700hz, 2200hz	66 milisec.	66 milisec.
Quarter-5 times	1700hz, 2200hz	33 milisec.	33 milisec.

NA = not available

Attention Readers!

2600 is always looking for information that we can pass on to you. Whether it is an article, data, or an interesting news item—if you have something to offer, send it to us!

Remember, much of 2600 is written by YOU, our readers.

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